



**Tom walking near his home with Rob and Georgia.**

## *In Memoriam*

Thomas F. Gilbert

1927–1995

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Behavior Research Company

Tom Gilbert passed away on Wednesday, September 27, 1995, after a 4-month bout with lung cancer that had spread throughout his body. His faithful partner and wife, Marilyn Bender Gilbert (formerly Marilyn Fers-ter), was with him throughout his final illness. These are simple facts that cannot hope to cover the complex study in contrasts that was Tom. His death will undoubtedly provoke a unique response from all who knew him. Stories about Tom are legion—he is partly a man of fiction.

### *How I Met Tom*

I met Tom in 1954. We both had a strong interest in standardizing behavior measurement. I was applying Skinner's rate of response in analyzing psychotic behavior, and Tom was interested in what he called the dimensions of behavior. We spent hours at conventions and meetings discussing how to measure the free operant. I thought a well-designed operandum and rate of response were sensitive enough, and nicely universal. Tom was convinced that rate was only one of three, or possibly four, dimensions, and to focus on rate alone was a major mistake. (These ideas became chapter 11 in *Human Competence*.)

Then one day in September 1957, Tom drove into the parking lot of my laboratory at Metropolitan State Hos-

pital, in Waltham, Massachusetts. His station wagon was bulging with the load: he, wife Betty, and several children inside; luggage strapped on the back and piled on top. When I asked, "Tom, what are you doing here?" He spat out angrily, "We are on our way back to Georgia!" I said, "But what brought you up here? I thought you were teaching at the University of Georgia." Tom replied, "Skinner accepted me to spend a sabbatical year in a fellowship with him here at Harvard. At Memorial hall they had no office for me! They didn't even know I was coming! And, Skinner is in England! We are on our way back to Georgia!" I said, "Tom, don't take this personally." Tom interrupted, stood ramrod straight, and with measured voice said slowly and emphatically, "I take this *highly* personally!"

I went on to say that Skinner often forgot things and, as my doctoral advisor, even missed my final doctoral orals. I said I had room for Tom to have a desk and could free one of our seven experimental rooms for him to use for research on operanda for his three free-operant dimensions. Tom cooled down, accepted my offer, and found an apartment in Cambridge. We would both drive over to Cambridge for the regular monthly pigeon lab meetings organized by Skinner and Charlie Ferster. In addition to working in my laboratory, Tom spent some time at a small desk in the Office for Programmed Instruction while he was in Cambridge. Here he met Jim Holland and Sue Markle and got in on the

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ground floor of teaching machines and programmed instruction.

### *A Proud Southerner*

Tom was a Southerner, proud of the Civil War South, proud to have been born a Southerner. He knew details of the Civil War that few others knew. He loved to tell about the crafty, cunning, brilliant, elusive, and handsome Francis Marion who, without supplies and with only a few men, regularly badgered the Union soldiers. He was called the Swamp Fox. I told Tom that the name for Rhode Islanders from South County near the Great Swamp, where I grew up, was "Swamp Yankee." So, during the year that Tom spent in my lab I might call to Tom "Hey Swamp Fox, come over here and look at this cumulative record if you want to see real behavioral control." And Tom would say, "No thanks, Swamp Yankee, you come over here and look at this operandum that will record all three dimensions of the free operant for the first time!"

Tom even sneaked General Robert E. Lee into the text of *Human Competence*. See if you can find it.

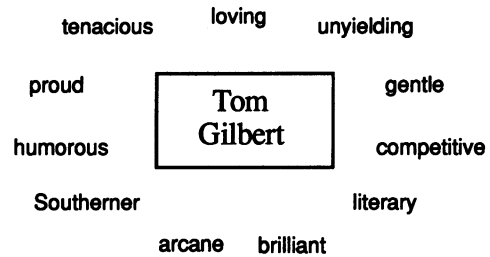
### *A Complex Man*

Tom was charismatic, flamboyant, brilliant, articulate, high response rate, tall, handsome, red-haired, driven, and highly creative. In his early years he drank a little too heavily and womanized a bit, as did many of the World War II generation. He was determined to make it on his own in business without the security blanket of a university tenure and retirement system. Tom was not willing to pay the social and political prices for that security.

Tom was strong, tough, and had a disregard for mortality. He was still smoking at the 1995 NSPI meeting in Atlanta. When I cautioned him about it he pooh-poohed me saying, "Now Oogie, you sound like Marilyn, cigarettes won't get me." At the age of 68 he still acted as immortal as a youth of 18 years.

Tom was often contrary. A letter to me dated July 5, 1977, on Praxis Corporation stationery arrived with his book *Human Competence*. In it Tom wrote, "I am sending an MS of *Human Competence*. I know you can't read, but at least you can heft it."

My wife, Nancy, knew Tom, and she described him as "complex." She drew the following diagram.



Carl Binder recently put this description of Tom on Compuserve:

Tom was my friend, a curmudgeonly caring man who taught me ideas and . . . was willing to go WAY beyond the usual concepts and frameworks, a "creative genius" in many ways. Tom could be cranky or gracious, delightful or annoying, very very funny, and then come out with some beautiful example of performance analysis and intervention he'd seen or thought about!

Yes, you loved him or hated him, and most often both at once.

### *A Loving Father*

Tom loved children, fathering seven in all: Kathleen, Micah, Sarah, and Adam with his first wife, Betty Battle; Jessie with S. K. Dunn; and Roby and Eve with his second wife, Marilyn Bender Ferster. Tom also stepfathered Bill, Andrea, Sam, and Warren, who were children of Marilyn and Charlie Ferster. In his last years he was a surrogate father to little Georgia, his grandchild, who lived with Tom and Marilyn in Hampton, New Jersey. At the NSPI meeting in Atlanta, Tom went out of his way to find a canvas tote with "Georgia" emblazoned over a picture of a beautiful peach to bring home as a school bag for his little Georgia.

It was fitting that, after listing 34

names in his acknowledgments to *Human Competence*, Tom listed last his seven biological children. Tom once told me, "Oggie, the greatest accomplishment of all is children. The more, the better!"

### *Humor*

Tom relished responding to Jehovah's Witnesses when they approached his doorway or outside airports. When they spoke to Tom about the Bible, he would look them sternly in the eye, raise his voice and exclaim, "Don't you talk to me about the Bible. You go read Matthew Six. It clearly states that you must pray in secret, and you shall not proselytize. Do you hear me, THE BIBLE SAYS THOU SHALT NOT PROSELYTIZE!"

John McKee relates that when extremely weak and hardly audible in his last stages, Tom heard his visitors saying that Medicare will probably be cut back, and that the new age has gone sour. Tom smiled and said, "That's lemon age."

When I last spoke to him on the phone, Tom said, "Oggie, I have the big C." I told him that Sherrington returned to religion in his old age, and asked Tom if he had started praying yet. Tom replied, "Oh, God! No!" Then paused a moment and laughed heartily for several minutes until stopped by a bout of coughing.

### *The Truth*

Tom never compromised the truth as he saw it. Many of his relations with his business partners were strained because of this. On a sales call to a key client, Tom might disagree with the position taken by the client's top instructional designer. Tom would let the client and his or her staff know in no uncertain terms that they were wrong, and that Tom and his company could fix their problems. Needless to say, this is the opposite of the successful "SPIN-selling." Tom's business associates thought that many lucrative contracts were lost in this fashion.

To Tom there was more at stake than just business. There was the clear, objective *Truth* at stake. And *Truth* should never be compromised!

### *A Wordsmith in the Southern Tradition*

Extremely well-read and erudite, Tom often wrote poetry. Ten of the 11 chapters in his classic *Human Competence* are introduced with one of Tom's poems.<sup>1</sup> My favorite is the introduction to chapter 6, "Information and Competence."

#### HAYSTACKS

Data, like the hay, is<sup>2</sup> usually dry  
And piled in stacks and measured by the bit.  
But how like the needle information is: It  
Always has a point and needs an eye.

### *Kosciuszko*

Tom had a way with words. He especially loved those that rolled on the tongue and thrilled the ear. Arcane information about the North and the South was an enduring aspect of our life-long friendship. I can still see and hear Tom teaching me (his peer and 5 years older) the beauty of English phrasing. With a slight tilt of his head and a twinkle in his eye he exclaimed. "Freedom shrieked when Kosciuszko fell! Freedom SHRIEKED, Oggie, Freedom SHRIEKED! Now that is using English the way it should be used." Meanwhile, I was left to puzzle over the subject. Who the hell was Kosciuszko, and where did he fall?

At the time, I assumed Kosciuszko, like Pulaski, was a Polish nobleman who volunteered to help the Colonials battle the British in the Revolutionary War. I concluded that he probably fought the British in the South, because

<sup>1</sup> Chapter 4, "The Performance Matrix," is introduced with an anonymous humorous Latin poetic pun that Tom must have recalled from his extensive study of Latin in high school.

<sup>2</sup> The "is" in the first line is Tom's. To a scholar "data" are plural, and "datum" is the singular. Therefore Tom should have written "are." Tom knew Latin, so this was his poetic license.

Kosciuszko was less well known to Northerner me than was Pulaski. Years later I remembered Tom's raised voice saying "Freedom SHRIEKED when Kosciuszko fell," and I fell to wondering again about this freedom fighter. Was he better known in the South?

I counted towns named for Pulaski and towns named for Kosciuszko in a Rand McNally road atlas. Eight states (Arkansas, Illinois, Indiana, Kentucky, Mississippi, Tennessee, Virginia, and Wisconsin) had a Pulaski, five in the South and only three in the North, making Pulaski more southern than northern. Only two states (Indiana and Mississippi) had a town named Kosciuszko (both spelled without the "z"). One was a northern and one was a southern state. I was wrong, and I could almost hear Tom Gilbert snickering that he had sent me to the library! But Kosciuszko certainly wasn't a damned southern Swamp Fox!

Recently, my musing over Tom's death got me wondering about the rest of the story—where and how Kosciuszko fell. So I looked him up in a computer search system. Watson Library at the University of Kansas had five biographies of Kosciuszko—three in Polish and two in English. In one of the English volumes I found that Kosciuszko died in Switzerland in 1817, 41 years after the revolution, and in bed. And in the other I found that he had been shot in the buttocks during the battle of Ticonderoga in New York. Maybe that's where the phrase began—not shot dead, but merely felled from an ignoble wound.<sup>3</sup> Nowhere could I find the words, "Freedom shrieked when Kosciuszko fell." Once again I was wrong. Once again Tom had sent me to the library. And, once again things there were very interesting, but not exactly as Tom had implied! Did Freedom shriek from pain or laughter?

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<sup>3</sup> Pulaski, on the other hand, was killed in battle in an unsuccessful attack on Savannah. Again Pulaski in the South and Kosciuszko in the North.

### *Early Life and Education*

Thomas Franklyn Roby Gilbert was born on January 3, 1927, in Durham, North Carolina, but he grew up in Columbia, South Carolina. His parents were Lillian Barton and Franklyn Gilbert. Franklyn was a radio announcer and newspaper reporter; Lillian a mother and successful business woman. Tom's younger brother was named James. Tom suffered from osteomyelitis as a youth and spent 2 years in bed. Through frustration with his physical confinement he became an avid reader and wordsmith. This condition made him 4-F in the World War II draft, which further frustrated him. He had recurrent bouts of bone problems throughout his life; he was unsteady on his feet and walked with a cane the last 10 years of his life.

Tom graduated from Columbia High School, and completed his BA and MA degrees at the University of South Carolina. He earned his doctorate in psychology from the University of Tennessee in 1953 with Ted Cureton as his advisor. At that time his specialties were statistics, testing, and measurement.

### *University Teaching*

Tom taught psychology and statistics first at Emory University and later at the University of Georgia. He went to Harvard for his sabbatical year fellowship in 1957. Tom then went to the University of Alabama, where he refused to teach, but instead wrote his mega-grant to performance engineer the city of Tuscaloosa.

### *Conceptual Accomplishments*

Tom first deviated from classic Skinnerian linear programmed instruction concepts when he started teaching with *mediators*. He considered memory aids a special class of mediators. He was particularly proud of his mediators for the resistor color code: a FIVE dollar bill is GREEN, ONE BROWN penny, a WHITE cat has NINE lives, SEVEN

PURPLE seas, a BLUE tail fly has SIX legs, ZERO BLACK nothingness, a RED heart has TWO parts, THREE oranges, a FOUR-legged YELLOW dog, an EIGHTY-year-old man has GRAY hair.

In workshops he was proud of saying, "I can teach you to cook a successful omelet in three seconds. Bring the eggs to room temperature before you break them." This is an example of another of Tom's principles, "Teaching a performance theory first."

He did not endear himself to the budding group of programmed instruction advocates when he wrote, "Throw away your teaching machines."

Tom has been most often called the founder of human performance technology. He was one of the great creators of behavior analysis. Starting with Cureton as a psychological statistician, he wound up a Skinnerian. Almost in passing, Skinner wrote that you could measure behavior or its results, and said little more. Gilbert said you should focus first on the valuable results, calling them *accomplishments*, and only later on behavior. He defined performance as the transactions between behavior and accomplishments. One of his favorite phrases was, "Behavior you take with you, accomplishments you leave behind." This focus linked behavior analysis to results, making it truly valuable in business. Tom called the economic value of the accomplishments *stakes*. He developed the first clear way to measure the cost effectiveness of performance interventions using the formula:  $\text{worth} = \text{value} - \text{cost}$ .

Tom's Potential for Improving Performance (PIP), the exemplary performance divided by the average, was a marked departure from traditional statistics, which ignores the outliers. Significantly, Tom expressed the PIP as a multiple, rather than a confusing percentage. Tom's PIP focuses on the exemplary performer—not the middle one, but the one whose performance could be an example to others. Exemplary performers were located and ex-

amined for performance variables that could be used to improve the performance of other workers, including the average.

The conceptual impact of Tom's teaching, writing, and speaking was worldwide. It produced the field and form of performance technology.

### *Writing Accomplishments*

Tom did not regularly write a certain number of pages or number of hours each day, as do most disciplined professional writers, and as did Skinner. Tom wrote in fits and starts when the ideas hit him. He wrote occasionally in feverish desperation all night to meet a contract or publisher deadline. This he despised, and didn't meet deadlines often or well.

What Tom did regularly each and every day was have ideas. He would stop everything to note these ideas. Stacks of his idea notes exist in his office and home in chronological rather than topical order.

Tom never learned to touch type, but typed rapidly using his two-finger system. Although it took him some time to make the switch from typewriter to word processor, he was writing on his computer in his final years.

Tom is best known for his 1978 classic *Human Competence: Engineering Worthy Performance*. Several of Tom's gems are not as well known but are equally innovative and brilliant. The first two 1962 issues of the journal, *Mathetics*, are still excellent instructional design resources. I know several instructional designers, lucky enough to have copies, who regularly refer to them to this day. The 1967 *Praxis Reading Series*, in which children learn the shapes and sounds of letters by first seeing them as objects, is both unique and highly effective. For example, a is shaped as an apple, d as a duck, e as an elephant's head, F as a flag, T as a table, and S as a snake. The series provides an excellent example of his instructional design principle of mediators.

The out-of-print *Praxis Reading Series*, the *Mathetics* volumes, and *Human Competence* should be reprinted and used today. Although Tom wrote many journal articles, he did not discover new relations and ideas so he could write about them. He did not discover them to make money. He discovered them to *know* them. So, as with many highly creative persons, he left behind giant stacks of brilliant notes, often written in a cursive hand that only he could easily decipher. These documents are a treasury of ideas. Marilyn plans to take the time and effort to catalogue these and make them available to the rest of us.

Tom was working on a second edition of *Human Competence* when he died, probably to be called *Human Competence Revisited*. His coauthor, Marilyn B. Gilbert, promises a complete draft to the publisher (HRD Press) in May for publication late in 1996.

### *Companies*

Tom founded and cofounded several companies. The first was Educational Design of Alabama (EDA), involving Mathetics, Incorporated, Tuscaloosa, Alabama. I'll never forget my surprise when I read "Mathetics, Inc." on Tom's and Charlie Ferster's badges at an American Psychological Association convention. I said, "What in the world is Mathetics?" Tom replied, "The study of learning. Look it up in the dictionary!"<sup>4</sup> These companies followed the collapse of Tom's comprehensive scheme to completely performance engineer the city of Tuscaloosa. Along with John McKee, Charlie Ferster, Charlie Slack, Jack Findley, and Paul Siegel, the plan was to put a behavioral program in every major public service program and institution in town. At that time Tom invited me to come join the team and move my Be-

havior Research Laboratory with its government grants from Harvard Medical School and Metropolitan State Hospital in Waltham, Massachusetts to Tuscaloosa, Alabama. The plan was to have integrated programs in contact with each other in the hospital, the mental health clinics, the jails, the police and fire departments, and the schools. All were to be in contact with the Department of Psychology at the University of Alabama, chaired by Paul Siegel. Mathetics had its own *Journal of Mathetics*, which published two issues. These are now collector's items.

The huge \$3 million grant for the Tuscaloosa program<sup>5</sup> was rejected by the National Institute of Mental Health. A year later, parts of the grant proposal were paraphrased and submitted by others who had received copies of the proposal that Tom had distributed widely throughout the country. This more modest proposal was funded and became the enduring Institute for Behavior Research (IBR), in Silver Spring, Maryland.

Educational Design of Alabama (EDA) was purchased by TOR Incorporated, for which Tom worked for a while after the buyout. (At the time, most of those involved said TOR stood for "Theory Of Reinforcement," but recently John McKee said he thought that was a joke, and not the correct meaning.)

A second company founded in New York City by Tom and Marilyn Gilbert and Charlie Jacobs was Praxionomy, Incorporated, further demonstrating Tom's delight in locating existing, precise, and little used words. Praxiology is in the unabridged dictionary as "the study of human action and conduct." Although praxionomy is not in the dictionary, following the word roots,

<sup>4</sup> According to Al Reis and Jack Trout in their 1981 book *Positioning*, you want a company name that everybody knows and no one has to look up.

<sup>5</sup> Paul Siegel called the grant "The Thing," and said the worst thing he had to do in his entire life was to administer Tom Gilbert and Charlie Slack. Both Tom and Charlie refused to teach because they were too busy writing proposals and meeting with community leaders to set up the grant.

it would mean the “laws of human action and conduct.” This is what Tom wanted his customers to know his company by. But most American business persons reacted to praxionomy as if it was cold, metallic, sterile, and had something to do with proctology.

A third company founded by Tom and Marilyn, with Irving Goldberg and Geary Rummler, was Praxis Corporation, New York, and later, Morristown, New Jersey. This company was bought by Kepner-Trisoe after operating successfully for 10 years.

Tom’s fourth company was the Performance Engineering Group, Hampton, New Jersey, which he and Marilyn operated until he died.

### *Professionals Trained*

Tom not only founded the field of performance technology, but several of its acknowledged leaders were trained by or worked under him. They at first worked with Tom and then later set up their own companies to focus on and market a part of Tom’s system.

Marilyn Gilbert was the first Matheticist. Tom called her “M1.” Marilyn has mostly specialized in applying principles of Mathetics to the teaching of writing. Joe Harless, a student of Tom’s at the University of Alabama, formed the Harless Performance Guild, and went on to develop “Job Aids” and the “ABCD” performance analysis system. Geary Rummler, of Rummler Bache, focused on the organizational hierarchy and successfully marketed analyzing and overcoming the “white space” in the organizational chart. John McKee, of Pace Learning, credits Tom with his educational and training systems design. Recently, Carl Binder, of Product Knowledge Systems, credits Tom with many of his most powerful business tools and concepts. Each took a part of the system that Tom outlined in *Human Competence* and simplified the terms, found a niche, and successfully marketed it. Tom realized that each had developed and marketed a part of his system, but

was convinced that none had applied all of it.

### *Associations*

Tom was not a member of the Association for Behavior Analysis (ABA) and did not regularly attend ABA conventions until the last 5 years. Tom attended every yearly convention of the National Society for Programmed Instruction (NSPI) since its founding in 1962. It became the National Society for Performance and Instruction (NSPI) and then recently the International Society for Performance Improvement (ISPI). In 33 years this society grew from 7 to 10,000 members with over 50 chapters in 36 countries worldwide. It grew from a handful of producers of programmed instruction materials to performance technology specialists in academics, consulting, financial services, manufacturing, government, military, utilities, health services, transportation, retail sales, and nonprofit organizations. ISPI’s current advocates (major supporters) are AT&T, Aetna Life, Apple Computer, Arthur Anderson, Bay Networks, Hewlett-Packard, IBM, Siemens, Sun Microsystems, Unisys Corporation, and Wells Fargo Bank. Tom listed his affiliation in the program of the 1994 and 1995 ABA conventions as “The National Society for Performance and Instruction.”

### *Awards*

Tom did not work for awards. His reinforcer was discovery, pure and simple. Although he did not work for awards, Tom received many. Because the list is long, I can mention only the most notable. The Organizational Behavior Management Network of the Association for Behavior Analysis awarded Tom its Lifetime Achievement Award in 1989. Tom was inducted into *Training Magazine’s* Hall of Fame on the first round. He was made one of the first Honorary Members for

Life of the National Society for Performance and Instruction in 1963. Tom was the first to receive its Distinguished Professional Achievement Award in 1990. Recently the ISPI Board of Directors renamed this award the “Tom Gilbert Award for Distin-

guished Professional Achievement in Performance Improvement.”

Tom has taken his behavior with him, but to us he has left his accomplishments. You can almost hear a Rebel yell, as performance technology SHRIEKED when Gilbert fell.